ABSTRACT OF THE DISCLOSURE

An electronic tire maintenance system is provided for measuring a parameter of a device at a first location. The system includes a sensor for measuring the device parameter and generating a data signal representing the measured parameter. The system also includes a microprocessor coupled to the sensor for activating the sensor on a first periodic basis to measure the device parameter. The microprocessor includes a memory for storing the generated data signal representing the measured parameter. A transmitter and a receiver are coupled to the microprocessor. The microprocessor periodically partially awakens to determine, on a second periodic basis, if a received transmission is a valid interrogation signal and, if so, fully awakens and responds to the valid interrogation signal, via the transmitter, by at least transmitting the last stored measured parameter. In one embodiment, the device is a tire tag mounted inside a tire that measures tire data and transmits that data to a remote source in response to an interrogation request, an alert condition, or automatically on a periodic basis.